ROCKY FLATS CITIZENS ADVISORY BOARD
MINUTES OF WORK SESSION
March 7, 1996

FACILITATOR: Reed Hodgin, AlphaTRAC

Eugene DeMayo called the meeting to order at 6 p.m.

BOARD / EX-OFFICIO MEMBERS PRESENT: Alan Aluisi, Jan Burda, Tom Clark, Ralph Coleman, Tom Davidson, Eugene DeMayo, Mike Freeman, Tom Gallegos, Paul Grogger, Mary Harlow, Susan Johnson, Sasa Jovic, Mike Keating, Jack Kraushaar, Beverly Lyne, Tom Marshall, LeRoy Moore, Gary Thompson / Dave Brockman, Jeremy Karpatkin, Steve Tarlton

BOARD / EX-OFFICIO MEMBERS ABSENT: Kathryn Johnson, Linda Murakami, David Navarro / Tim Rehder

PUBLIC / OBSERVERS PRESENT: Kenneth Werth (citizen); Frank Smith (citizen); Gerry Kelly (Kaiser-Hill); Kay Ryan (SWEIS); J. Anderson (citizen); Joe Rippetoe (IMAA); David Abelson (David Skaggs' office); Forrest Shoemaker (ComRad); Jim Stone (RFCC); Shawki Ilorahim (CSU); Mariane Anderson (DOE); Larry Helmerick (DOE); Carol Anderson (Kaiser-Hill); Carol Potnoe (Kaiser-Hill); Elizabeth Pottorff (CDPHE); Gordon Pierce (CDPHE); Robert W. Terry (CDPHE); Gerd von Glinski (citizen); Paula Elofson-Gardine (EIN); Susan Hurst (EIN); Don Scrimgeour (CAB interim project administrator); Ken Korkia (CAB staff); Erin Rogers (CAB staff); Deb Thompson (CAB staff)

PRESENTATION - THE ROCKY FLATS ENVIRONMENTAL MONITORING PROGRAM:

Kaiser-Hill (Gerry Kelly): Gerry gave an overview of some of the environmental monitoring programs currently used by Kaiser-Hill - effluent and ambient air, and surface and groundwater. The objective is to protect public health and environment, comply with regulations, identify trends, and assist with any emergency response necessary. For 1996, changes will be made to the program in order to make it more cost-effective. Those changes have produced an integrated monitoring program developed in concern with EPA, CDPHE and the cities of Broomfield and Westminster; expected to be completed by this summer. Highlights include:

Effluent monitoring - falls into two groups: 1) sources that have to be monitored continuously, the frequency of sample collection and screening reduced from 2 times per week to once a week; and 2) other sources to ensure emissions remain below the threshold, the frequency reduced from twice a week to once a month - analysis will be done once a year instead of every month.

Ambient air monitoring: monitor and collect samples from 41 locations - only three are routinely analyzed (samples are retained to be analyzed later if necessary). There are three types of air monitoring stations: 1) on-site (only remaining site is at the 903 pad); 2) site

perimeter (2 stations providing data downwind); 3) off-site (5 COMRAD monitors remain).

Surface water monitoring: DOE no longer samples prior to discharge (CDPHE still monitors); sampling of Walnut Creek at Indiana has been eliminated (Broomfield will collect samples); and reduced frequency of waste water treatment plant sampling.

Groundwater monitoring: K-H is monitoring on a quarterly basis - approximately 150 wells are monitored. The number of wells monitored and frequency of analysis has been reduced in concert with regulatory agencies.

CDPHE (Steve Tarlton): CDPHE began monitoring during the 60s and 70s. After the AIP was signed in 1989, the program accelerated. Based on what was learned, CDPHE modified its monitoring plan.

Air: The levels of pollutants now are lower than generally found in the Denver area, and measured plutonium levels in the air have decreased over time. The trend of high levels of plutonium in the air was significantly reduced when production ceased; it has stabilized now at the low end. CDPHE runs two types of monitoring stations: 1) "D" & "E" stations monitor continuously for radionuclide analysis; 2) "X" stations periodically sample for particulate, inorganic, metals and VOCs analysis. Changes made in 1996 to air monitoring include: consolidating stations sampling plutonium and americium; changed plutonium and americium monitoring activities west and south of the site; and changed method of VOC sampling.

Water: CDPHE found that plutonium is mobilized during precipitation events. May's heavy rains produced one of the few times the level has gone above standard for ponds A4 and B5. However, pond C2 (located on Woman Creek - it intercepts flow from the South Interceptor Ditch) exceeded the standard - probably for more than a month - and it did have to be discharged. Generally, CDPHE has found there are no problems off-site, and its results usually are the same as DOE's. Changes made for 1996: consolidated sampling activities; reduced the number of analysis for BNAs, herbicides, and some metals; shift to "event" related sampling of Woman and Walnut Creeks; and discontinue ground water sampling (CDPHE will now do split samples with DOE).

RESPONSE TO PRESENTATION:

Ward Whicker (CSU): Based on what he heard during the presentation, the monitoring programs sound fairly standard. He expressed concerns about the future of Rocky Flats - many releases will occur during environmental remediation activities. Management needs to be careful about disturbing the land; the cleanup may be worse than leaving it alone. Plutonium does not move readily - it has been found to move only in large events like what occurred last spring. However, small particles in the airstream are the biggest concern, and DOE needs to be aware of and concerned about the size of particles that may be released. He suggested DOE and Kaiser-Hill use a mobile monitoring station to monitor remediation activities at remote locations.

Gale Biggs: Gale discussed emissions, their sources, and monitoring of ambient concentrations. He noted that the Health Advisory Panel stated the most dangerous health exposure to the public was from the airborne pathway. He believes public health needs should be met first, then worry about complying with regulations. Highlights from his

presentation include:

Stack emissions: Most emissions are very small particle size (0.045 microns), which pass through banks of HEPA filters. DOE and its contractor are spending more funds on stack emissions, but that's not the problem - it is fugitive emissions.

Fugitive emissions: These come primarily from soil and exposed sources, such as the exposed surface of the evaporation ponds. Except for high wind conditions, the particles being emitted are small in size. The majority of plutonium emissions from Rocky Flats are fugitive (estimated at from 60% to 99%). So shutting down every building on the site results in only a small reduction in emissions. Remediation involving surface cleanup will only increase emission. Soil emissions are very small particles, with some larger. Particles tend to decrease in size and increase in number - so as it moves downwind, you increase the number of particles, thereby exposing more people. The small particles attach to larger particles in the atmosphere (such as pollen and organic matter), but at what distance is unknown. Monitors probably will not be able to measure these particles.

Discussion & Q/A Session:

Question: What is the particle size that is of concern for inhalation as far as being embedded in the pulmonary system?

Answer: Primarily less than about a few microns - one, two or three, somewhere in that range. There's a pulmonary deposition about 80% or 90% that is deposited in the bone marrow. Gases are a little different, you inhale it but it comes right back out. These small particles will play out in the lung tissue. I would expect the really small particles would have a high probability of playing out in the lungs. But they also can be deposited from the air.

Question: Regarding reducing the amount of sampling, as I understand they're going to begin heat-treating residues and plutonium, which means back in the nuclear operation. So your justification for reducing sampling because nothing was going on would be good if you continue to do nothing, but it's not a very good justification if you're actually starting nuclear operations again.

Answer: This reduction is for current operations. We are going to have project-specific monitoring as well that we have to integrate into our site-wide monitoring. We are going to do what's appropriate for future activities. We have been drawing up plans for future site activities such as ASAP.

Question: Is the state going to do the same thing?

Answer: There are two things to look at. There is a regulatory function that works with them to monitor stack emissions. We haven't talked about that today, but the group that handles that activity spends time in the buildings, talks to people, figures out what they're going to do, and what kind of monitor would be appropriate to that emission based on the operations in that building. That's an ongoing process, and every time something changes we look at that. In terms of our ambient monitoring program, I don't see changes on that basis. When we get into cleanup, we will need more monitoring. That will be required specific to the activity, and will not be part of the ambient monitoring program nor the stack

emissions program.

Question: On the ambient air monitoring, you mentioned that out of the 41 stations, three are routinely analyzed. Are the three constantly the same, and why did you select those three? Is there a record of high values?

Answer: Yes, they are the same ones. One is associated with the 903 pad, and the others are downwind of the prevailing winds. We chose those particular locations, the 903 pad because it's the strongest source - probably about 60% of the emissions from the plant come from that source. The other two locations are in the area that we would typically model as the most impacted region off-site, the perimeter along Indiana and U.S. 93. The highest values in the ambient perimeter network are seen in that region, as well as the modeling results and year-to-year predicting.

Question: I would like to let everybody know that the City of Westminster, City of Broomfield, and several other of the municipalities have been involved in a core group that's been looking at this monitoring program. This is the first time this week we have seen the program that Rocky Flats has come up with. We have a lot of concerns, both cities, about this new program. I would like the audience to know that, that we have not given a consensus on this. Also, have you used any of the past monitoring data to help make the decisions on revising the monitoring network, and if so have those data been made available to the stakeholders?

Answer: The program that was described to you this evening is the program that was instituted this fall before the DQO process started. What you heard tonight is not the result of the DQO process in which the cities, the state and EPA are involved. Tat's not going to be manifested until this summer. Both the existing program and future programs do use past data. The programs that we're evaluating now will definitely reflect past data and concentrations.

Question: Has the company taken all that data, and made a data base out of the trends so you can see exactly what's been going on over the years there?

Answer: No, we're not that far along. We're still trying to identify our decisions and make our decision rules.

Question: Are your decisions more money based?

Answer: No. Our decisions are public health, environmental protection and compliance based. They're not money-based at all. My program is not separate from budget cuts. There are areas in which we can improve, and our budget has compromised our data. We think we'll have support to maintain an appropriate level of monitoring.

Question: I'm confused by what you're saying. You say that your program is being cut back, that it already has been cut back. I assume it has been cut back for economic reasons. But you say you're preparing a more robust monitoring program when the operations that are going to endanger the public and environment are really under way. Things have been dormant at Rocky Flats for more than five years, since 1989. Two big things that are going to happen which will pose a risk and danger are the processing of plutonium and residues, and the D&D or remediation work at the site including taking down buildings, etc. There

may be disturbance of the soil. Those things need increased monitoring. But you're talking about a reduced program, and yet you say we're getting ready to have a bigger program. I need you to clarify.

Answer: The existing program to monitor existing activities has been reduced. When we start other programs, they're going to be augmented as appropriate. But the current program has been reduced. Funding is a factor, but a lot of the monitoring really wasn't necessary. We rely on much more than monitoring data to control our operations. We rely much more on upstream process knowledge. Ambient monitoring, to a large extent, only confirms exposures we already know about. It's after the fact. What we do is concentrate our energies on tracking.

Comment: All monitoring discovers what's already happened. It's a rather imprecise science.

Response: Yes, so we spend our energy in trying to stay on top of processes, building activities, before anything happens, before there's a release. We monitor very closely and do lots of calculations to ensure that activities will not exceed the .1 monitoring threshold. Because it's imprecise, that's why we concentrate on upstream controls.

Question: You mentioned that your standard for the water was not health-based. Is there a way we can appeal that? Are we trying to move toward having that health based?

Answer: The original standards for Rocky Flats were set by the state Water Quality Control Commission in 1990, and that was based on the data available at the time and setting that minimum level. That was easily achievable, but it wasn't based on a strictly health standard. It's my understanding that in the action level group that's evaluating action levels associated with cleanup under RFCA is looking at a health based number and if that number is .15 picocuries per liter, which is about three times the value we now have. As soon as that information is completed, it will go out as part of the workshops that are going to go along with RFCA. We're comparing what they do against the .15 picocuries per liter. Today, you'll find a much lower concentration. But in the process we were charged with looking at a risk-based analysis.

Question: This has to do public involvement. In the presentation about the establishment of your integration team and DQO training, you said you initiated the DQO process in November, and stakeholder involvement is supposed to be happening in early 1996. What we've learned in the last two years here is that the earlier on that we have stakeholder involvement, the fewer times we have to go back. The only reason we're monitoring at all is because there are people outside the perimeter. It seems logical that at the outset we involve those people. Also, you describe that we have monitoring as <u>appropriate</u> as the work plans progressed, and I would say that's one of those words we need to define and stakeholders need to be intimately involved in. I would like to hear from DOE and the state how can we get some sort of a commitment from the department, or from Kaiser-Hill, to do this.

Answer: Two responses: First, the cleanup activities will be undertaken under one of the processes that are established. There's a PAM (Preliminary Action Memorandum) process, there's an IM/IRA process, and then there's the CERCLA record of decision process. That is a cleanup plan which goes out for public comment, and part of the plan is the monitoring that goes with it. There is a public comment opportunity on the monitoring to be performed

specific to a cleanup activity. Second, Kaiser-Hill this summer inherited a program that had been in effect at the plant where a lot of monitoring was being done within different programs, and it was not necessarily efficient. One of the things they are trying to do is to straighten them out so that we don't have a lot of individual duplication of monitoring within the site. The next step is for CDPHE and the cities to look at all the monitoring that's being done and make sure it fits together. It's a real challenge to get the inside-the-fence monitoring programs integrated.

Question: When asked if the data was available for stakeholders, you seemed to say no. If that's true, then on the three monitors on the ambient air, is that data also not available? What's available, what isn't available?

Answer: The data is available. But we haven't looked at it yet in our DQO exercise. For our revisions, our modifications of existing programs, we haven't yet looked at the past data. But it is definitely a basis for our existing programs, and it is available.

Question: There's no more production at the plant site with beryllium anymore, but are you familiar with Ryan's Pit which was just excavated and beryllium was found. I believe we should have beryllium monitoring still going on in the ambient air and in the surface waters.

Answer: We do monitor beryllium in the ambient stations. We monitor for beryllium at one spot, but that's probably not enough. We need to look at that, that's a good point. Again, we would have project-specific monitoring based on pollutants of concern for individual programs.

Question: The soil from Ryan's Pit was supposed to be microwave stabilized to get volatiles out. Even though you used sodium iodide, you never saw any radioactivity until the soil was analyzed. People were stabilizing that soil, so there must have been some releases of beryllium.

Answer: We do have beryllium at all five sites. But there are cleanup-specific plans, and the plans are flexible so that when they identify a pollutant of concern, they add it to the list.

Please go to Part II of 3/7/96 Minutes